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Achieving MDGs 4 and 5 in Punjab: The role of family planning

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Achieving MDGs 4 and 5 in Punjab: The Role of Family Planning

This briefing paper focuses on the policy options available to the Punjab government in affecting just how much Punjab's population will grow by 2050 and its potential to achieve MDGs 4 and 5.

THE STATE OF MATERNAL HEALTH IN PUNJAB

Maternal mortality is a leading cause of death among women of reproductive age in Punjab — about 16% of the deaths in this age group were pregnancy-related (PDHS 2006/07).

Approximately 6,000 women die each year in Punjab alone due to pregnancy-related factors despite the recent improvement in reproductive health indicators. Pregnancies that occur too early, too late, or too frequently increase the risk of maternal death. Lowering fertility rates by increasing the use of family planning can help reduce the number of pregnancy-related deaths.

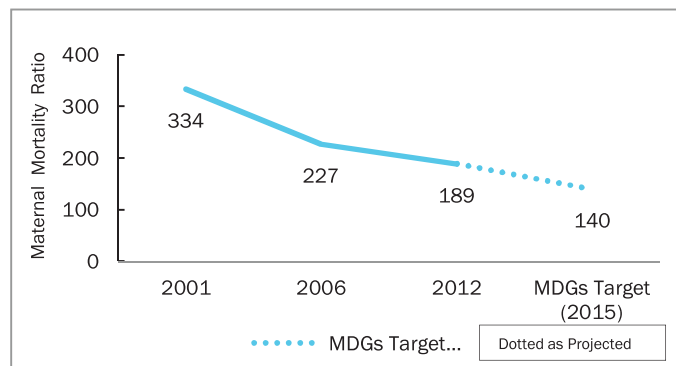


Figure 1: Trend in maternal mortality ratio and the MDG 5 target

The good news is that there has been a decrease in maternal mortality in Punjab (Figure 1). The maternal mortality ratio (MMR) was estimated at 334 per 100,000 live births in 2001; in 2006, it was measured at 227, and by 2012 it had fallen to 189 per 100,000 live births.

Maternal health indicators have improved and more than half the women in Punjab received antenatal care (ANC) in 2012 — a rise of 56 percentage-points since 1991. The proportion of women assisted by a skilled birth attendant (SBA) during childbirth has also risen three times from 16% in 1991 to 53% in 2012 (Figure 2). However, this masks wide urban-rural disparities since skilled birth attendance is 69% in urban Punjab and 46% in rural Punjab (PDHS 2012/13).

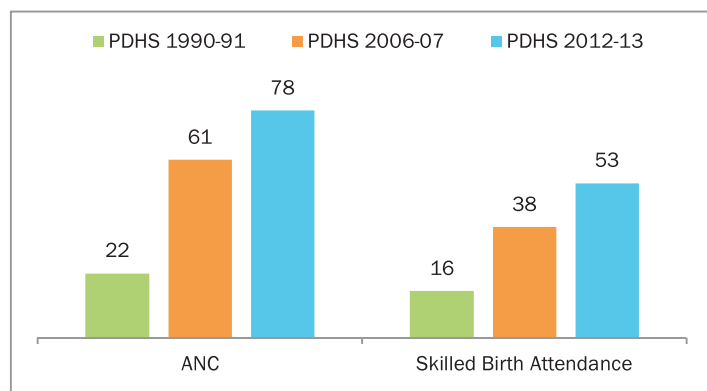


Figure 2: Maternal health indicators (in %)

The proportion of deliveries assisted by SBAs varies considerably across northern and southern Punjab. Southern Punjab has the lowest proportion of deliveries assisted by SBAs in contrast to northern Punjab (Figure 3). For instance, only 17% of pregnant women were assisted by SBAs in Rajanpur, while the highest level (80%) of skilled birth attendance is in Jhelum in northern Punjab.

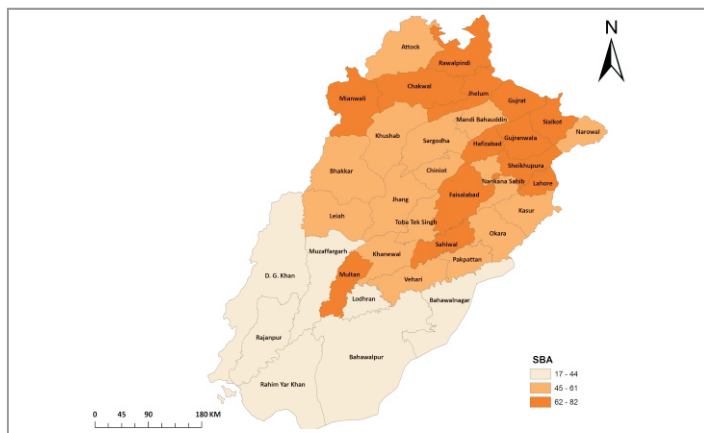


Figure 3: Skilled birth attendance by district

Source: MICS 2011

6,000 women in Punjab die annually due to pregnancy-related complications.

THE MISSED OPPORTUNITY IN MATERNAL HEALTH: LOW CONTRACEPTIVE PREVALENCE IN PUNJAB

The contraceptive prevalence rate (CPR) among married women in Punjab has risen from 33% in 2006/07 to 41% in 2012/13. This represents a 1.3 percentage-point annual rise over the last six years (Figure 4). The use of modern methods has increased from 10% in 1991 to 29% in 2012 (Figure 4). A notable 12% of women of reproductive age reported using traditional methods in 2012.

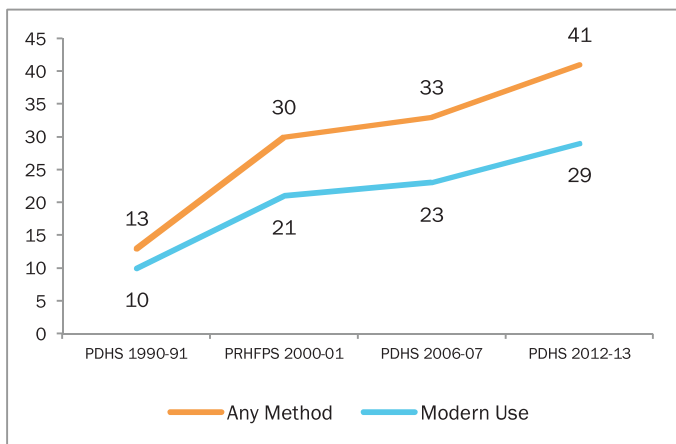


Figure 4: Contraceptive use in Punjab, 1991-2013

Urban-rural differences in contraceptive use remain significant — the use of any method is 23% higher in urban areas than in rural areas, reflecting the greater use of withdrawal in urban Punjab.

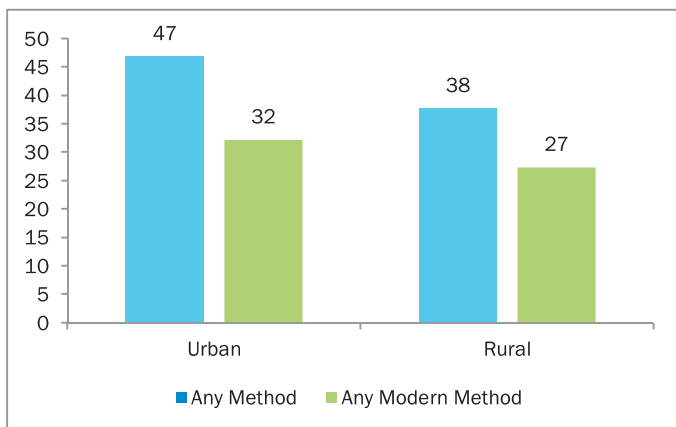


Figure 5: Contraceptive use by place of residence in Punjab

Source: PDHS 2012/13

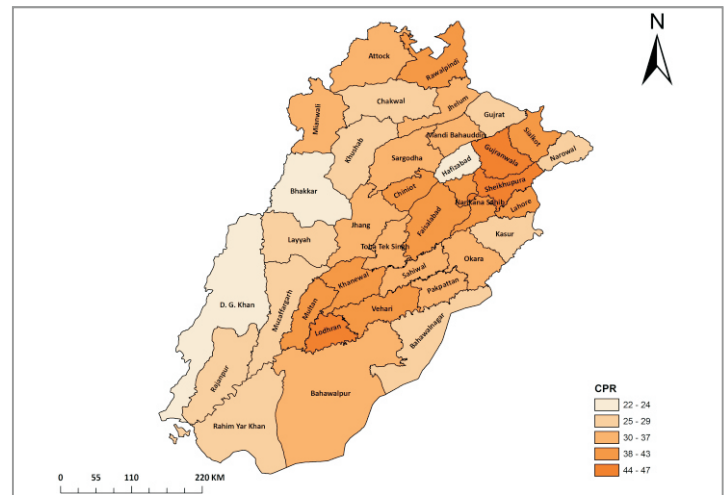


Figure 6: CPR by district in Punjab

Source: MICS 2011

There is considerable inter-district variation in the CPR (Figure 6). It is particularly low in the southern and less developed districts of the province (e.g., 22% in Dera Ghazi Khan) compared to the northern districts (e.g., 47% in Gujranwala) (MICS 2011).

Fertility preferences show that most women would prefer to space or limit their next birth: 54% want no more children and 17% want to delay their next birth by at least two years. Only 24% want another child soon within the next two years (Figure 7).

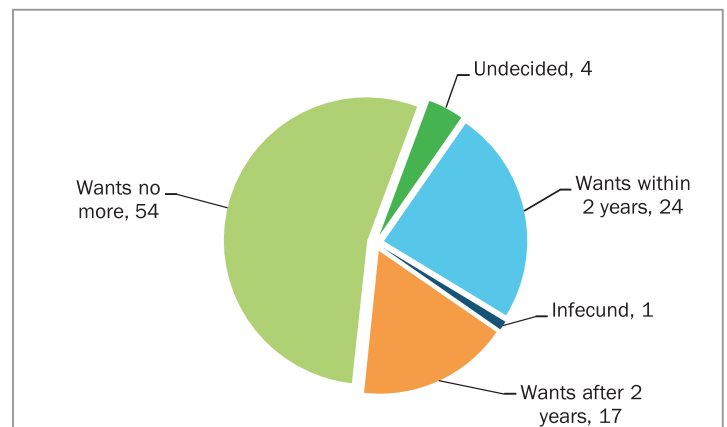


Figure 7: Fertility preferences of married women aged 15-49 years

Source: PDHS 2012/13

71% of women and 65% of men in Punjab prefer smaller and better-spaced families.

INFANT AND UNDER-FIVE MORTALITY RATES

MDG 4 sets a target of reducing infant and under-five mortality by two thirds between 1990 and 2015. While these rates have declined in Punjab from 1990 to 2006, the last six years have seen a rise in infant and under-five mortality. The infant mortality rate (IMR) has increased from 81 in 2006/07 to 88 per 1,000 live births in 2012/13 (Figure 8) and the under-five mortality rate has increased from 97 to 105 between 2006 and 2012. Punjab has to bring down its infant and under-five mortality rates to 35 and 44, respectively, to achieve its MDG targets.

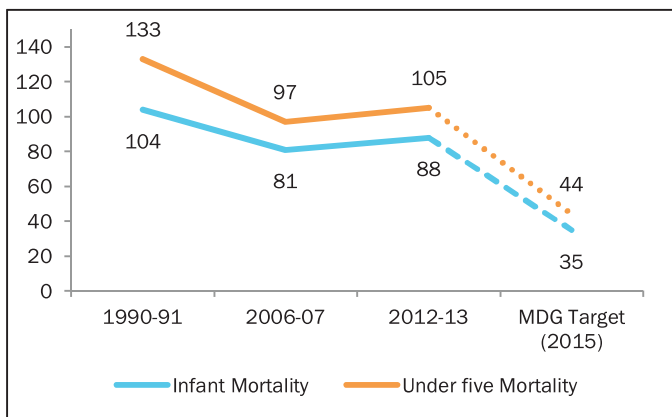


Figure 8: Infant and under-five mortality rates and MDG targets
Source: PDHS

Averages tend to mask the variations in IMRs across socioeconomic groups and regions within the province. Maternal education has a considerable impact on the IMR — children with mothers who have had no schooling account for almost double the IMR of those whose mothers have studied up to or beyond secondary school (Figure 9). Similar differences are found among infants born in the poorest households whose mortality rate is more than double that of infants born in better-off households.

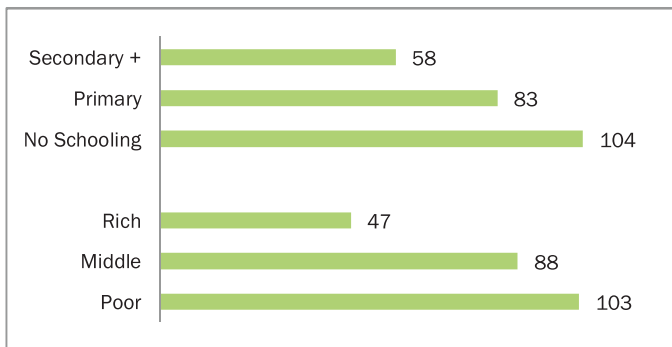


Figure 9: Socioeconomic differentials in IMR
Source: PDHS 2012/13

Punjab has to bring down its IMR to 35 and its under-five mortality rate to 44 to achieve the MDG 4 target by 2015.

Variations in the IMR across districts of Punjab can be seen in Figure 10. The highest range of 87–130 (per 1,000 live births) is found primarily along the western, southern, and eastern borders of the province. The lower range of 51–63 (per 1,000 live births) is found in northern and central Punjab, reflecting uneven progress in lowering infant mortality.

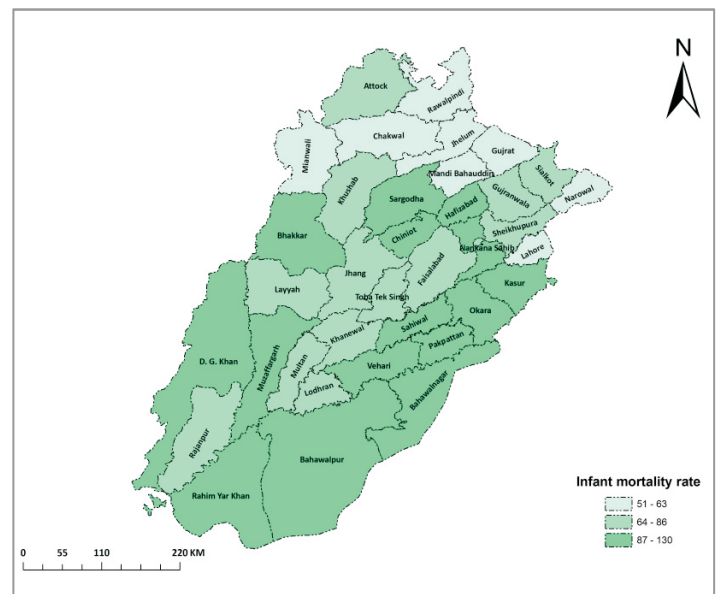


Figure 10: IMR by district in Punjab

Source: MICS 2011

This calls for more attention, facilities, and care to be focused on the less developed regions of Punjab, where the IMR can rise as high as 130 deaths per 1,000 live births. The low level of 51 is observed in the northernmost regions.

The children of the poorest and least educated mothers have higher IMRs.

High levels of infant and under-five mortality rate in South Punjab are a cause for alarm.

THE MISSED OPPORTUNITY: BIRTH SPACING AND INFANT AND CHILD HEALTH

Punjab's persistently high levels of neonatal and post-neonatal mortality are cause for alarm. Neonatal mortality stagnated at 58 per 1,000 live births from 1990 to 2006 and has increased in the last six years to 63 per 1,000 live births.

At the same time, post-neonatal mortality decreased by almost half during 1990 to 2006, from 46 to 23 per 1,000 live births. However, it has also increased slightly in the last six years.

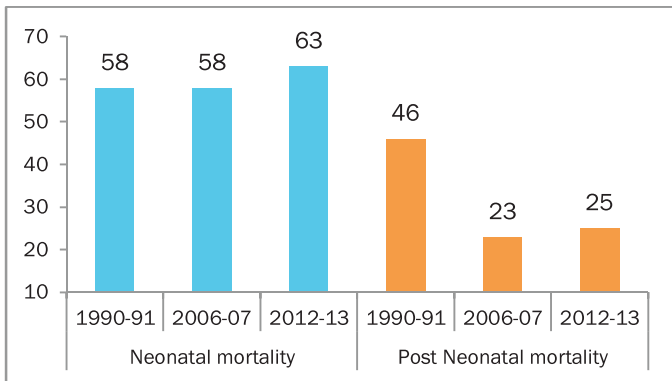


Figure 11: Neonatal and post-neonatal mortality rates in Punjab

Source: PDHS 2012/13

The strong association between maternal health and infant survival, particularly for neonates, is the basis of the Healthy Spacing and Timing of Pregnancies initiative launched by the World Health Organization. A child's risk of dying is strongly correlated with certain fertility behaviours. The risk of death is much higher among children born to mothers who are too young (under 18 years) or too old (over 35 years) and among those born after a short birth interval (less than 24 months) or to mothers with high parity (3+ children).

The use of family planning to space births is an extremely effective but as yet untapped route to reducing infant and particularly neonatal mortality.

About three fifths of the births in Pakistan are characterized as high-risk due to short intervals and high parity. Other interventions such as immunization and ORS are applied to prevent post-neonatal deaths.

Improving access to and use of modern family planning methods would enable women to limit early or late childbearing and closely spaced births, thereby reducing the probability of infant and child mortality.

Birth intervals of less than two years account for the highest neonatal and post-neonatal mortality rates (Figure 12). There is a marked reduction in neonatal and post-neonatal mortality when the birth interval is two or more years. Neonatal mortality can be reduced to 39 per 1,000 live births with a birth interval of more than two years, while post-neonatal mortality would fall by more than half.

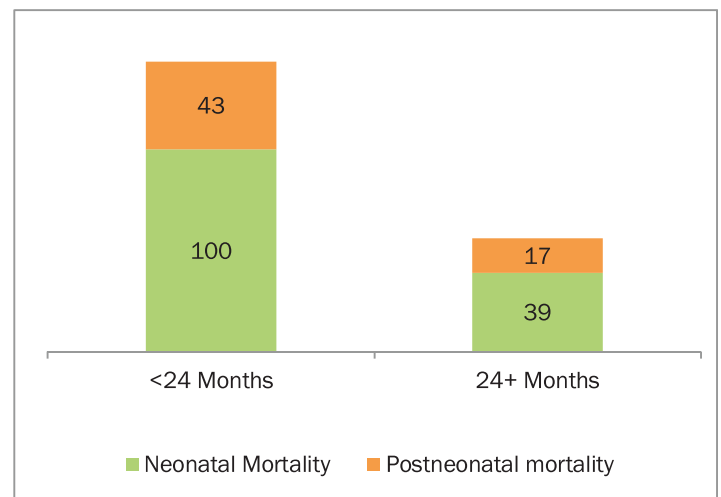


Figure 12: Neonatal and post-neonatal mortality in Punjab by birth interval

Source: PDHS 2012/13

Women who practice family planning can avoid high-risk births and reduce their chances of having a baby who will die in the neonatal and infancy period.

Longer birth intervals will help reduce neonatal mortality.

UNWANTED FERTILITY AND THE UNMET NEED FOR FAMILY PLANNING

This brief presents a prescription for bringing about a significant decrease in the number of maternal deaths. It is well established internationally and in Pakistan that unintended pregnancies and unsafe abortions are leading causes of maternal deaths.

We also know that 71% of the women in Punjab want to prevent or delay their next pregnancy. Moreover, the recent PDHS for 2012/13 indicates that, despite some gains, there is still a large unmet need for family planning. About 18% of women have indicated an unmet need for contraception to space and limit their childbearing (Figure 13).

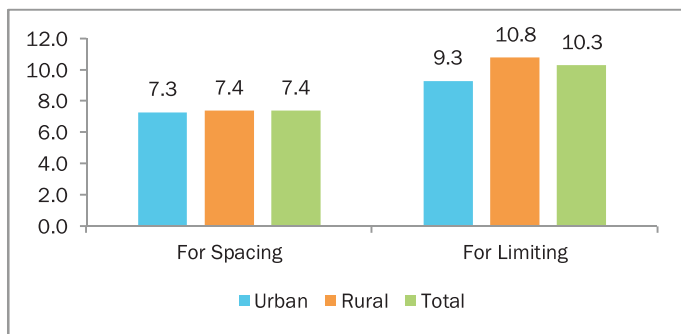


Figure 13: Unmet need for spacing and limiting by urban and rural residence
Source: PDHS 2012/13

The unmet need for contraception to limit family size is higher in rural areas than in urban areas. This reflects greater room for raising the CPR in rural Punjab. **If the demand for family planning were satisfied, the CPR would rise to 59% in Punjab.**

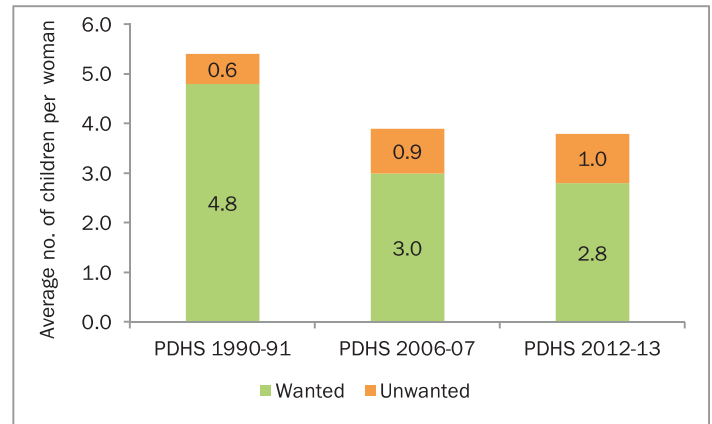


Figure 14: Average number of wanted and unwanted children per woman in Punjab

Source: PDHS

On average, a woman in Punjab has 3.8 children over her reproductive lifespan (Figure 14). If women could prevent the one child (on average) that they did not want at all or wanted later, **the fertility rate in Punjab would fall to 2.8 children per woman.**

POST-ABORTION COMPLICATIONS IN PUNJAB

Unwanted pregnancies can also lead to post-abortion complications (PAC), which result primarily from induced abortions.

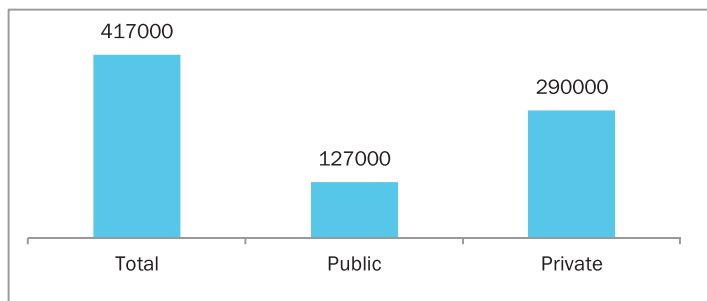


Figure 15: Number of PAC cases in Punjab

Source: Post-Abortion Care in Pakistan: A National Study, Population Council, 2013.

Punjab accounts for almost 60% of the annual PAC caseload out of a total of 696,000 cases estimated nationally. It has an estimated 417,000 PAC cases per year — the highest of all four provinces (Figure 15). Out of every 1,000 women of reproductive age (15–49), 16 sought treatment for PAC in 2012 in Punjab. PAC cases are treated predominantly in the private sector in Punjab – about 70% (Figure 15).

Investing resources in family planning would clearly help achieve MDGs 4 and 5 by preventing the nearly one third of total 4.7 million pregnancies in Punjab that are unintended.

POTENTIAL SCENARIOS FOR SAVING MOTHERS' AND CHILDREN'S LIVES

MATERNAL MORTALITY

There is untapped potential for increasing the CPR by accelerating the use of family planning to eliminate unmet need. Below, we present the potential benefits of increased family planning and skilled birth attendance (Figure 16) — the two major drivers of change in reducing maternal deaths.

This analysis includes three different scenarios to present the case for family planning and fertility decline as an effective way of reducing maternal deaths*.

Scenario 1: Increase the coverage of SBA to 80%. This will lower the number of maternal deaths from 6,027 to 4,082.

Scenario 2: Focus solely on increasing family planning and increase the CPR to 59% by eliminating the unmet need for family planning (18%). This will reduce maternal deaths by 45% — from 6,027 to 3,316, **saving 2,711 maternal lives**.

Scenario 3: If the CPR is increased to 59% and SBA to 80%, then the number of maternal deaths will drop to 2,232 — about a third of the current number — **saving 3,795 maternal lives**.

Just increasing contraceptive prevalence to 58% will reduce the current number of maternal deaths by almost 45%.

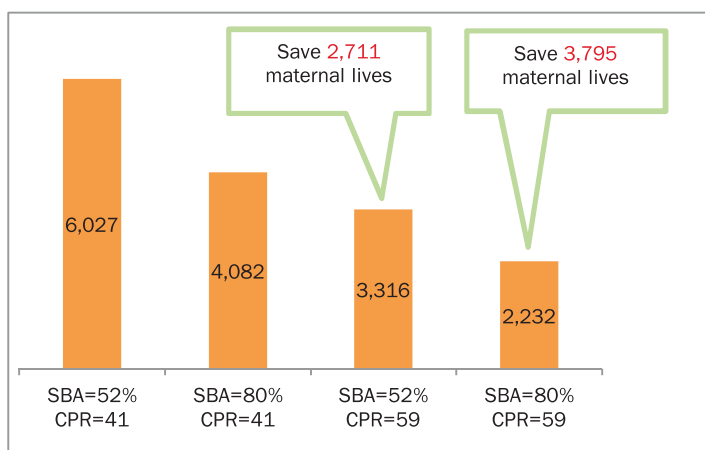


Figure 16: Impact of family planning on maternal deaths

Source: PDHS 2012/13 and simulation based on Maternal Mortality 2000: Estimates developed by WHO, UNICEF and UNFPA, WHO, and Liu et al. (2008).

INFANT AND CHILD MORTALITY

Using the established relationship between contraceptive use, high-risk fertility behaviour, and infant and child mortality, we have run simulations for two contraceptive-use scenarios that capture the effect of increased contraceptive use on infant and child mortality*.

Scenario 1: If contraceptive use increases to 50%, the number of infant deaths will decrease from **280,619** to **242,352**, **saving 38,267** infant lives. Child deaths (children aged 1–4) will fall from **54,210** to **35,077**, saving an additional **19,133** children's (aged 1–4 years) lives.

Scenario 2: By eliminating the entire unmet need for family planning in Punjab and increasing contraceptive use to 59%, there would be **73,344** fewer infant deaths and **41,445** fewer child deaths (aged 1–4 years).

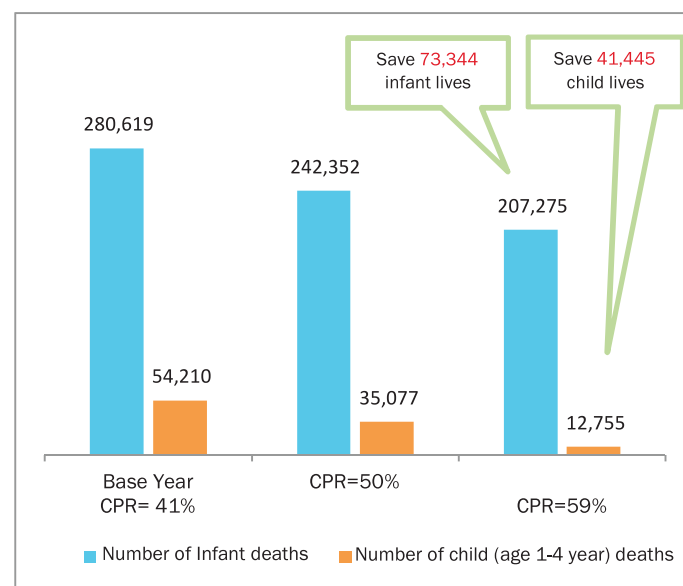


Figure 17: Impact of family planning on infant and child (age 1–4 yr) deaths

Source: PDHS 2012/13 and simulation based on FAMPLAN model.

73,000 infant and 41,000 child (ages 1–4) deaths could be averted by eliminating the unmet need for family planning.

PUNJAB'S DEMOGRAPHIC PROSPECTS

The population of Punjab has increased fivefold in the last 60 years since independence. However, the pace of growth accelerated during the 1980s and 1990s as mortality rates declined and fertility remained high. The population doubled from 37 million to 74 million between 1972 and 1998, and is close to 100 million today. Punjab's current annual population growth rate is around 2.1%.

A rapidly growing population results in a struggle to ensure access to basic healthcare, education, and economic opportunities for an increasing number of people. Punjab's population of almost 100 million is already placing enormous stress on the province's infrastructure and resources.

PUNJAB'S DEMOGRAPHIC TRANSITION

Figure 18 shows population pyramids for 1972, 2013, and 2050, which depict Punjab's transition in terms of age structure.

Punjab is currently passing through the middle phase of the demographic transition, although it still has a large youth population: 65% of the province's population was under the age of 30 in 2013. If fertility rates continue to decline at a moderate pace, by 2050 the proportion of the population under 30 years of age will have decreased to 43%. Falling dependency ratios resulting from a rising working-age population and declining numbers of children and the elderly offer the opportunity of a demographic dividend in Punjab.

FERTILITY DECLINE: SLOW AND UNEVEN

Although the population continues to grow, fertility rates have declined significantly throughout the province since the 1970s (Figure 19). Fertility dropped from 6.8 children per woman in the 1970s to 5.4 in 1991. The total fertility rate (TFR) in 2012 was 3.8 children per woman.

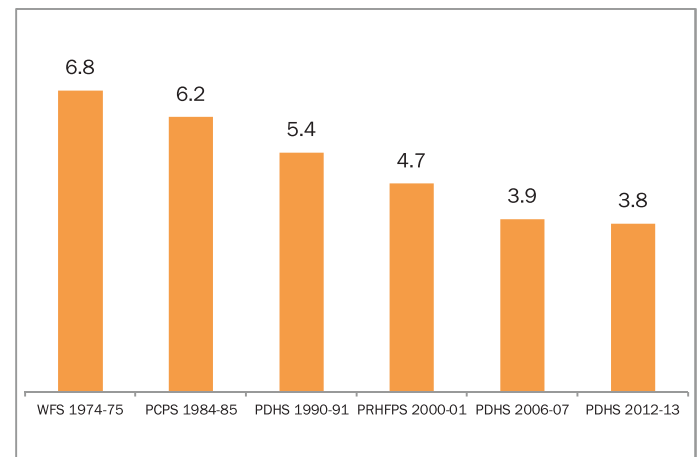


Figure 19: Total fertility rates in Punjab, 1974–2013

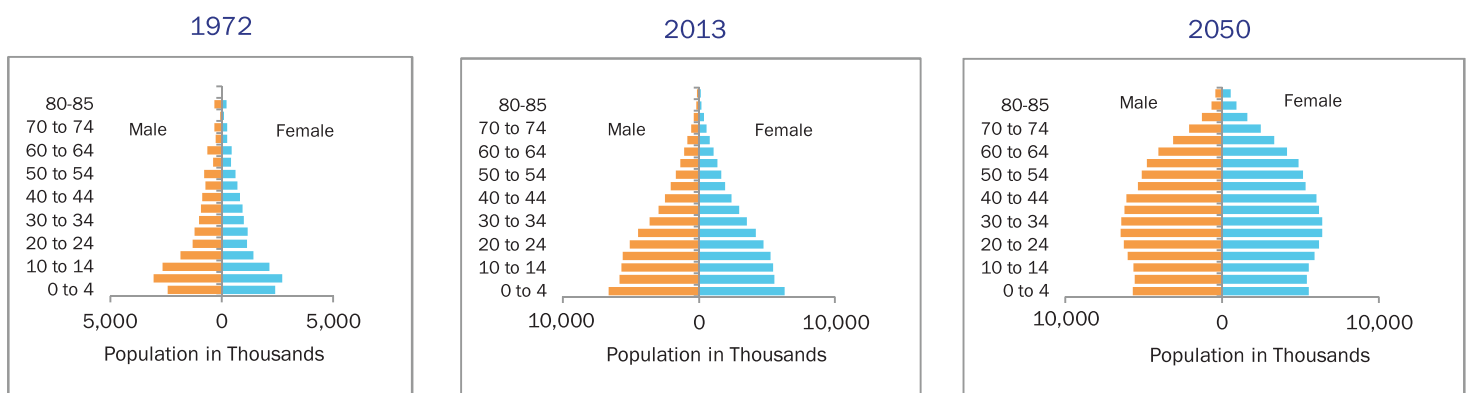


Figure 18: Stages of the demographic transition in Punjab

Source: Population Council estimates

Punjab has the chance to benefit from a fertility decline that could result in both improved maternal and child health and economic development through the demographic dividend.

Despite overall gains in fertility reduction, the change has not been uniform across the province. There are significant differences in fertility rates by place of residence and socioeconomic status. Women in rural Punjab continue to have almost one child more than their urban counterparts, while poor families have approximately two (or more) children more than rich families (Figure 20).

Fertility rates are also lower for women with higher levels of education: the TFR is 4.3 for those with no education, 4.1 for those with primary schooling, 3.3 for those with secondary education, and 2.7 for those with tertiary education.

Geographical variations in Punjab are even more marked. Districts in the south, such as Rajanpur and Dera Ghazi Khan have fertility levels of almost 4.9 children per woman. However, districts in northern Punjab, such as Chakwal, have a much lower fertility level (about 2.5 children per woman).

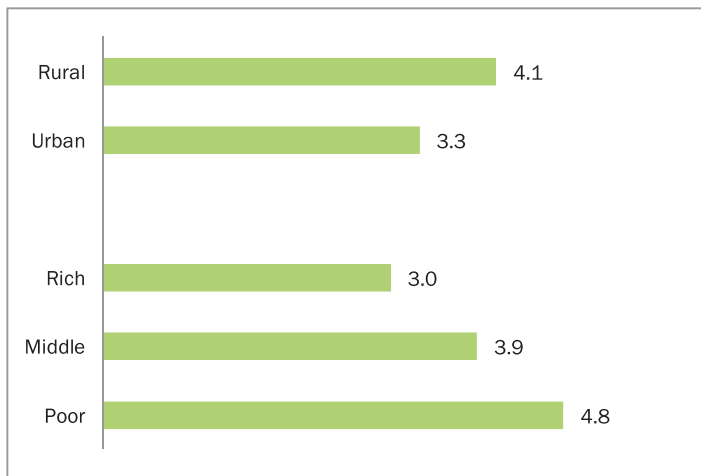


Figure 20: Fertility rates by place of residence and socioeconomic status
Source: PDHS 2012/13

Punjab's population will continue to grow over the next few decades, largely due to continuing high levels of fertility and the population momentum built into the growth rate, given the province's youth population. Future growth will be driven by three main demographic factors:

- The persistently high levels of fertility, particularly in southern Punjab
- A very young age structure due to high fertility in the past
- The large number of women who are entering childbearing age.

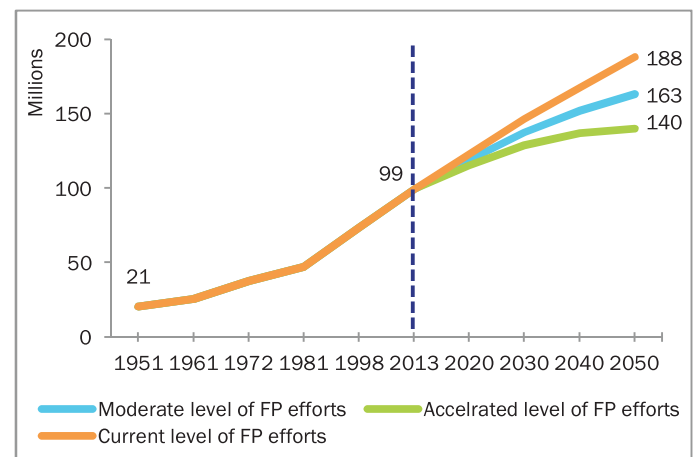


Figure 21: Population projections for Punjab, 1951–2050
Source: Population Council

Future fertility levels will determine whether the population of Punjab will rise to 140 million or 188 million by 2050 (Figure 21). The decision to invest in a rapid fertility decline through **a strong family planning program could make a difference of 48 million more people in Punjab by 2050.**

An accelerated family planning program could make a difference of 48 million more people in the province by 2050.

BRINGING IT ALL TOGETHER: THE BENEFITS OF MEETING THE UNMET NEED FOR FAMILY PLANNING AND ACCELERATING THE FERTILITY DECLINE

Reducing the unmet need for family planning offers the opportunity to lower infant, child, and maternal mortality through the provision of good-quality family planning services in Punjab. Expanding family planning services and increasing contraceptive use will have a direct impact on the birth rate and on maternal mortality.

Clearly, investing resources in family planning would help achieve MDGs 4 and 5 because it would prevent nearly a third of the current 4.7 million pregnancies in Punjab.

The decrease in the number of unwanted pregnancies will reduce recourse to unsafe abortions as well as the number of post-abortion care clients. It will also reduce the number of deliveries significantly, allowing the Punjab government to utilize its already overburdened resources and facilities to improve the quality of maternal care.

THE KEY TO EXPANDING ACCESS TO FAMILY PLANNING SERVICE DELIVERY

Access to family planning services will increase substantially if the entire public health system delivers these services. In particular, lady health workers (LHWs) are needed to facilitate the outreach of family planning services. Figure 22 shows how access to family planning services is limited if they are provided solely by the Population Welfare Department through family welfare centers (FWCs) in Dera Ghazi Khan. The GIS maps are based on a census of reproductive health facilities and show how family planning services can be enhanced dramatically for this district if Department of Health static outlets and LHWs are effectively involved.



Figure 22: Map of Dera Ghazi Khan district: a) Just FWCs, b) FWCs with MOH static clinics, and c) FWCs, static clinics, and LHWs.

Source: FALAH GIS Mapping Survey, 2008.

Access to family planning services will increase substantially if Department of Health static outlets and LHWs are effectively involved.

CONCLUSIONS

This briefing paper presents a combination of recent data — including from the PDHS 2012/13, MICS 2011, and PSLMS 2010/11 — to make the case for prioritizing family planning to meet MDGs 4 and 5.

Although fertility rates in Punjab have declined, wide differentials persist. Progress in the stages of the fertility transition across northern and southern Punjab is uneven. Greater efforts are required to establish parity in the fertility decline, especially in rural Punjab.

Infant and child mortality remain high. Neonatal mortality rates in Punjab have remained the same over the last 20 years. Among the major factors behind the persistently high infant and neonatal mortality rates are high fertility and short birth spacing. It is now well established that longer intervals between births decrease neonatal and infant mortality. Family planning offers a route to lowering both neonatal and infant mortality.

While wanted fertility has declined in Punjab, unwanted fertility has increased. The unmet need for family planning has also declined, but it remains substantial especially in rural and southern Punjab.

The data establishes a strong connection between family planning and maternal mortality. Given the uneven geographical patterns across Punjab, policymakers will have to focus on particularly vulnerable regions and segments of the population to improve the province's indicators. There is an opportunity to bring the health and population welfare sectors together to expand access to family planning services. Addressing the unmet family planning need in Punjab will not only lead to marked reductions in both maternal and infant mortality, but its benefits will also spur other important outcomes in education, employment, and economic opportunities. Punjab is well positioned to benefit from a demographic dividend, but accelerating the fertility decline is a necessary precondition.

SOME RECOMMENDATIONS TO ACCELERATE FAMILY PLANNING EFFORTS

- Increase provincial political support and resource allocation for family planning efforts.
- Promote family planning as a health intervention.
- Include birth spacing services as part of the health policy.
- Ensure the availability of contraceptive supplies by strengthening procurement and logistics systems for all public health and private service outlets.
- Improve the technical and communication skills of service providers through client-centered family planning training for better service quality.
- Utilize the Population Welfare Department's training facilities to train health providers.
- Focus on vulnerable regions and segments of the population.
- Increase access through public-private partnerships and by contracting out mechanisms already being promoted by the provincial government to improve service delivery.

* A more detailed report titled **"Prioritizing Family Planning for Achieving Provincial Maternal Child Health and Development Goals"** elaborates on the data and methods presented in this briefing paper.

'Prioritizing Family Planning for Achieving Provincial Maternal Child Health and Development Goals' is a project funded by the Maternal and Newborn Health Programme – Research and Advocacy Fund (RAF), and is implemented by the Population Council.

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